

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A recording medium comprising a recorded program and data to be used in a program execution system including a program execution device that executes various programs, at least one operation device into which are inputted operation requests by a user as operation instructions to said program execution device, wherein

said recorded program has a direction maintenance step by which if, along with a motion of any character on a display device, based on an operation instruction about a character motion direction, a switching is made from a first fixed viewing perspective to a second fixed viewing perspective on said display device and so long as said operation instruction is maintained, the direction of motion of said character in said second fixed viewing perspective is maintained in coordination with the direction of motion of the character on a map in said first fixed viewing perspective at least as determined immediately before the switching is made, and

only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewing perspective, a direction of motion of the character is calculated based on the second fixed viewing perspective, and its position then determined based on a position of the character and a motion direction from the operation instruction.

2. (previously presented) The recording medium as described in claim 1, wherein if said first fixed viewing perspective on said display device is to be drawn based on a coordinate transformation based on a first viewpoint and said second fixed viewing perspective on said

display device is to be drawn based on a coordinate transformation based on a second viewpoint, said direction maintenance step has a computation step that computes said direction of motion of said character based on said first viewpoint.

3. (Currently Amended) A recording medium comprising a program and data recorded thereon and which are to be used in a program execution system including a program execution device that executes various programs, at least one operation device into which are inputted operation requests by a user as operation instructions to said program execution device, and a display device that displays images output from said program execution device, wherein said program comprises:

- a first computation step which determines at least position coordinates of a character in a scene on the display device from a motion vector of the character based on an operation inputted by the user as seen from a first viewpoint,

- a viewpoint switching step that switches viewpoints if necessary, based on said position coordinates of said character,

- a second computation step which determines at least position coordinates of the character in the scene on the display device from a motion vector of the character based on an operation inputted by the user as seen from a second viewpoint switched by the viewpoint switching step,

- wherein the second computation step to determine position coordinates of the character in the scene after switching the viewpoint, as long as an operation is inputted and maintained by the user before switching the viewpoint, by using the motion vector of the character motion based on the operation, and

an image drawing step that draws a three-dimensional image of said character based on said current viewpoint, in accordance with said position coordinates of said character obtained by said first computation step and said second computation step, and

only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewpoints, a direction of motion of the character is calculated based on the second viewpoint, and its position then determined based on a position of the character and a motion direction from the operation instruction.

4.- 5. (cancelled)

6. (currently amended) A program execution system comprising:

a program execution device having a controller that executes various programs;

at least one operation device into which are inputted operation requests by a user as operation instructions to said program execution device; and

a direction maintenance means which is a program that is operated in said controller of said program execution device, said direction maintenance means if, along with a motion of any character based on an operation instruction concerning a direction of motion of a character on said display device, and a switching is made from a first fixed viewing perspective to a second fixed viewing perspective on said display device and so long as said operation instruction is maintained, maintaining the direction of motion of said character in said second fixed viewing perspective in coordination with the direction of motion of the character on a map in said first fixed viewing perspective at least immediately before the switching is made, and

only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewing perspective, a direction of motion of the character is calculated based on the second fixed viewing perspective, and its position then determined based on a position of the character and a motion direction from the operation instruction.

7. (previously presented) In a program execution system as described in claim 6, wherein said direction maintenance means further comprises:

a computation means that computes said direction of motion of said character based on said first viewpoint

if said first fixed viewing perspective is to be drawn based on a coordinate transformation based on a first viewpoint and said second fixed viewing perspective is to be drawn based on a coordinate transformation based on a second viewpoint.

8. (currently amended) A program execution system comprising:

a program execution device having a controller, and executing various programs;
at least one operation device into which are inputted operation requests by a user as operation instructions to said program execution device;
a display device that displays images outputted from said program execution device; and
an image processing means configured as a program that operates in said controller in said program execution device; wherein
said image processing means includes:

a first computation means that determines at least position coordinates of a character in a scene on the display device from a motion vector of the character based on an operation inputted by the user as seen from a first viewpoint,

a viewpoint switching means that switches a current viewpoint if necessary based on said position coordinates of said character,

a second computation means that determines at least position coordinates of the character in the scene on the display device from a motion vector of the character based on an operation inputted by the user as seen from a second viewpoint,

wherein the second computation step determines at least position coordinates of the character in the scene after switching the viewpoint, as long as an operation is inputted and maintained by the user before switching the viewpoint, by using the motion vector of the character motion based on the operation, and

an image drawing means that draws a three-dimensional image of said character based on said current viewpoint, in accordance with said position coordinates of said character obtained by said first computation means and said second computation means, and

only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewpoints, a direction of motion of the character is calculated based on the second viewpoint, and its position then determined based on a position of the character and a motion direction from the operation instruction.

9. (currently amended) A program execution device to which can be connected at least an operation device that outputs operation requests by a user as operation instructions, said program execution device comprising:

a direction maintenance means by which if, along with a motion of any character on the display device based on an operation instruction concerning a direction of motion of a character on said display device, a switching is made from a first fixed viewing perspective to a second fixed viewing perspective on said display device and so long as said operation instruction is maintained, the direction of motion of said character in said second fixed viewing perspective is maintained in coordination with the direction of motion of the character on a map in said first fixed viewing perspective at least immediately before the switching is made, and

only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewing perspective, a direction of motion of the character is calculated based on the second fixed viewing perspective, and its position then determined based on a position of the character and a motion direction from the operation instruction.

10. (currently amended) A program execution device to which can be connected at least an operation device that outputs operation requests by a user as operation instructions and a display device for displaying images, the program execution device comprising:

a first computation means that determines at least position coordinates of a character in a scene on the display device from a motion vector of the character based on an operation inputted by the user as seen from a first viewpoint,

a viewpoint switching means that switches a current viewpoint if necessary based on said position coordinates of said character,

a second computation means that determines at least position coordinates of the character in the scene on the display device from a motion vector of the character based on an operation inputted by the user as seen from a second viewpoint switched by the viewpoint switching step,

wherein the second computation step determines at least position coordinates of the character in the scene after switching the viewpoint, as long as an operation is inputted and maintained by the user before switching the viewpoint, by using the motion vector of the character motion based on the operation, and

an image drawing means that draws a three-dimensional image of said character based on said current viewpoint, based on said position coordinates of said character obtained by said first computation means and said second computation means, and

only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewpoints, a direction of motion of the character is calculated based on the second viewpoint, and its position then determined based on a position of the character and a motion direction from the operation instruction.

11. (currently amended) A recording medium comprising a program and data recorded thereon and which are to be used in a program execution system including a program execution device that executes various programs, at least one operation device into which are inputted operation requests by a user as operation instructions to said program execution device, and a display device that displays images output from said program execution device, said program comprising:

a first computation step which determines at least position coordinates of a character in a scene on said display device from a motion vector of said character based on the operation inputted by the user as seen in a first motion coordinate system based on a first viewpoint,

a viewpoint switching step that switches viewpoints from a first viewpoint to a second viewpoint based on said position coordinates of said character on said display device, said second

viewpoint having associated therewith a second motion coordinate system that differs from said first motion coordinate system,

a second computation step which determines at least position coordinates of the character in the scene on the display device from a motion vector of said character, said motion vector based on an operation inputted by the user as seen from said second viewpoint by said maintained operation instruction in accordance with said first motion coordinate system,

wherein the second computation step determines at least position coordinates of the character in the scene after switching the viewpoint, as long as an operation is inputted and maintained by the user before switching the viewpoint, by using the motion vector of the character motion based on the operation, and

an image drawing step that draws a three-dimensional image of said character based on said first or second display device viewpoint, in accordance with said position coordinates of said character obtained by said first computation step and said second computation step, and

only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewpoints, a direction of motion of the character is calculated based on the second viewpoint, and its position then determined based on a position of the character and a motion direction from the operation instruction.

12. (original) The recording medium as described in claim 11, wherein said motion vector of said character in said second display device viewpoint is determined in accordance with said second motion coordinate system once said maintained operation instruction is terminated.

13. (currently amended) A program execution system comprising:

a program execution device having a controller, and executing various programs;
a display device that displays images outputted from said program execution device;
at least one operation device into which are inputted operation requests by a user as operation instructions to said program execution device, said operation instructions associated with movements of a character displayed on said display device;

said display device further comprising a first viewpoint in which movements of said character is controlled in accordance with a first movement coordinate system, and a second viewpoint in which movements of said character is controlled in accordance with a second movement coordinate system,

an image processing means configured as a controller program that operates in said controller in said program execution device, wherein said image processing means further comprises:

a first computation means that determines position coordinates of said character in said first display device viewpoint, said position coordinates based on a first motion vector of said character in said first display device viewpoint in accordance with operation instructions,

a viewpoint switching means that switches from said first display device viewpoint to said second display device viewpoint if necessary based on said position coordinates of said character,

a second computation means that determines position coordinates of said character in said second display device viewpoint, said position coordinates based on a second motion vector of said character in said second display device viewpoint in accordance with operation instructions, and

an image drawing means that draws a three-dimensional image of said character in said first or second display device viewpoint, in accordance with said position coordinates of said character obtained by said first computation means and second computation means respectively,

wherein if said operation instruction is maintained during a switch from said first display device viewpoint to said second display device viewpoint, said second motion vector governing movement of said character in said second display device viewpoint is controlled in accordance with said first movement coordinate system, such that movement of said character is consistent between first and second display device viewpoints while said operation instruction is maintained during and immediately after said switch between said viewpoints,

wherein said second computation means and said image drawing means are repeatedly executed for as long as said operation instruction is maintained by said user, and

wherein once said operation instruction is terminated after said switch from said first display device viewpoint to said second display device viewpoint, said second motion vector governing movement of said character in said second display device viewpoint is controlled in accordance with said second movement coordinate system, and

only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewpoints, a direction of motion of the character is calculated based on the second viewpoint, and its position then determined based on a position of the character and a motion direction from the operation instruction.

14. (previously presented) The recording medium as described in claim 1, wherein said direction of motion of said character in said second fixed viewing perspective is maintained for as long as said operation instruction is maintained by said user.

15. (previously presented) The recording medium as described in claim 1, wherein said character motion direction is continuous from said first fixed viewing perspective to said second fixed viewing perspective.

16. (cancelled)

17. (previously presented) The program execution system as described in claim 6, wherein said direction of motion of said character in said second fixed viewing perspective is maintained for as long as said operation instruction is maintained by said user.

18. (previously presented) The program execution device to as described in claim 9, wherein said direction of motion of said character in said second fixed viewing perspective is maintained for as long as said operation instruction is maintained by said user.

19. (previously presented) The recording medium as described in claim 1, wherein the switching from the first fixed viewing perspective to the second fixed viewing perspective is discontinuous.

20. (currently amended) A program execution system comprising:

- a program execution device having a controller, and executing various programs;
- at least one operation device into which are inputted operation requests by a user as operation instructions to said program execution device;
- a display device that displays images outputted from said program execution device; and

an image processing means configured as a program that operates in said controller in said program execution device; wherein

said image processing means includes:

a first computation means that determines at least position coordinates of a character in a scene on the display device from a motion vector of the character based on an operation inputted by the user as seen from a first viewpoint,

a viewpoint switching means that switches a current viewpoint if necessary based on said position coordinates of said character,

an operation input decision means that decides whether an operation input from at least one operation device maintains before and after the viewpoint switching means switches the current viewpoint; and

a second computation means that determines at least position coordinates of the character in the scene on the display device from a motion vector of the character based on an operation inputted by the user as seen from a second viewpoint,

wherein the second computation step determines at least position coordinates of the character in the scene after switching the viewpoint, when the operation input decision means decides the operation input from the operation device is maintained, as long as an operation is inputted by the user before switching the viewpoint, by using the motion vector of the character motion based on the operation, and

an image drawing means that draws a three-dimensional image of said character based on said current viewpoint, in accordance with said position coordinates of said character obtained by said first computation means or said second computation means, and

only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewpoints, a direction of motion of the character is calculated based on the second viewpoint, and its position then determined based on a position of the character and a motion direction from the operation instruction.